CLAIMS

1. A class D electroacoustic amplifier without feedback loop containing a supply voltage source (8), an amplifier low-pass filter (14), a power stage (2) controlled by a pulse width modulated signal, a saw-shaped voltage generator (4) and a comparator (3), to one of which inputs an audio signal is sent, while its second input is connected to the adder (6) of the compensation circuit of supply voltage influence on the output audio signal, to which a voltage from a reference voltage source is sent, characterized in that a low-pass filter (9) and a high-pass filter (10) are connected to the supply voltage source (8), and the reference voltage source (12) is connected to an inverting circuit (11), whose input is connected to the low-pass filter (9) output, while the high-pass filter (10) output and the output of the inverting circuit (11) are connected to a multiplier (7), whose output is connected to the input of another multiplier (5), whose second input is connected to the saw-shaped voltage generator (4), and the multiplier (5) output is connected to one input of the adder (6), whose second input is connected to the saw-shaped voltage generator (4).

2. The class D electroacoustic amplifier, according to claim 1, characterized in that the output signal $v_0(t)$ of the inverting circuit (11) sent to the multiplier (7) input, which is a modified constant of the supply voltage, is expressed by a formula $v_0(t) = k_1 \times V_{DCref} / [k_2 \times v_i(t)]$, where V_{DCref} is the voltage of the reference source, $v_i(t)$ is a slow-changing signal on the low-pass filter (9) output, and the coefficient $k_1 \in <0.5; 2.0>$ and the coefficient $k_2 \in <0.2; 1.5>$.

3. The class D electroacoustic amplifier, according to claim 2, characterized in that the output signal of the multiplier (7), which is the error signal $e(t)$, sent to the multiplier (5), is expressed by the formula $e(t) = k_3 \times v_0(t) \times v_{ii}(t)$, where $v_0(t)$ is a modified supply voltage constant, $v_{ii}(t)$ is a fast-changing signal on the high-pass filter (10) output, and the coefficient $k_3 \in <0.8; 10.0>$.

4. The class D electroacoustic amplifier, according to claim 3, characterized in that the output signal $V_{CM}(t)$ of the adder (6), which is the corrected carrier wave signal, sent to one input of the comparator (3), is expressed by the formula $V_{CM}(t) = k_4 \times V_C(t) \times [1/k_5 + e(t)]$, where $V_C(t)$ is a high frequency carrier wave generated by the generator (4), $e(t)$ is the error signal, and the coefficient $k_4 \in <0.2; 1.5>$ and the coefficient $k_5 \in <0.2; 3.0>$.

5. A method of compensation of supply voltage influence on the output audio signal in an electroacoustic amplifier, which contains a saw-shaped signal generator and a comparator making use of pulse width modulation, and which is powered from a power supply, and to whose input an audio signal is sent, and whose second input is connected to an adder of a compensation circuit of supply voltage influence on the output audio signal, to which a voltage from a reference voltage source is sent, characterized in that from the power supply source (8) a fast-changing signal $v_{ii}(t)$ and a slow-changing signal $v_i(t)$ are extracted and then the slow-changing signal $v_i(t)$ is inverted and multiplied by the a value of a reference supply voltage V_{DCref}, which results in an output signal $v_o(t)$, which then is multiplied by a fast-changing signal $v_{ii}(t)$, which results in an error signal $e(t)$, which then is multiplied by a saw-shaped signal $V_C(t)$ from the generator (4), and the resulting signal is added to a saw-shaped signal $V_C(t)$ and as a corrected carrier wave $V_{CM}(t)$ is sent to one of the inputs of the comparator (3), which makes use of pulse width modulation, and to its second input the audio signal is sent.

6. The method of compensation of supply voltage influence, according to claim 5, characterized in that the output signal $v_o(t)$ of the inverting circuit (11) sent to the multiplier (7) input, which is a modified constant of the supply voltage, is expressed by a formula $v_o(t) = k_1 \times V_{DCref} / [k_2 \times v_i(t)]$, where V_{DCref} is the voltage of the reference source, $v_i(t)$ is a slow-changing signal on the low-pass filter (9) output, and the coefficient k_1 takes the values from the range $<0.5; 2.0>$ and the coefficient k_2 takes the values from the range $<0.2; 1.5>$.

7. The method of compensation of supply voltage influence, according to claim 6, characterized in that the output signal of the multiplier (7), which is the error signal $e(t)$, sent to the multiplier (5), is expressed by the formula $e(t) = k_3 \times v_0(t) \times v_{ii}(t)$, where $v_0(t)$ is a modified supply voltage constant, $v_{ii}(t)$ is a fast-changing signal on the high-pass filter (10) output, and the coefficient k_3 takes the values from the range <0.8; 10.0>.

8. The method of compensation of supply voltage influence, according to claim 7, characterized in that the output signal $V_{CM}(t)$ of the adder (6), which is the corrected carrier wave signal, sent to one input of the comparator (3), is expressed by the formula $V_{CM}(t) = k_4 \times V_C(t) \times [1/k_5 + e(t)]$, where $V_C(t)$ is a high frequency carrier wave generated by the generator (4), $e(t)$ is the error signal, and the coefficient k_4 takes the values from the range <0.2; 1.5> and the coefficient k_5 takes the values from the range <0.2; 3.0>.